AUTHOR INDEX

Baird, A. 103
Bettelheim, P. 27
Böhlen, P. 143
Boyd, A. W. 43

Casscells, W. 177

Davis, I. 43
Draetta, G. 267

Fausto, N. 218
Feige, J.-J. 103
Fukunaga, R. 131

Gage, F. H. 57
Gullick, W. J. 115

Hedin, C.-H. 207

Kawaja, M. D. 57
Kovesdi, I. 143

Ling, N. 243
Lyman, S. D. 235

Maher, D. W. 43
Miyazono, K. 207
Morstyn, G. 43

Nagata, S. 131
Nakamura, T. 67

Pagano, M. 267
Palladino, M. A. 159
Parker, T. G. 1

Qayum, A. 115

Ruscetti, F. W. 159

Schinstine, M. 57
Schneider, M. D. 1
Shimasaki, S. 243
Sillaber, C. 27

Takatsu, K. 87
Tominaga, A. 87

Usuki, K. 207

Valent, P. 27

Waxman, J. 115
Williams, D. E. 235

SUBJECT INDEX

ACTH, regulation of growth factor receptors in adrenal cortex 108
α-Actin, transcription in cardiac muscle, FGFs 14
Activin, in heart 3, 5
Adrenal cortex, growth factor regulation of growth and function 103–113
AIDS, TGF-β production 171
Allograft rejection, TGF-β 168
Angiogenesis, PD-ECGF 214
Angiotensin II, smooth muscle cells 188
Anti-inflammatory agent, IL-4 48
Atherosclerosis, smooth muscle cells 178
  PDGF 181
Autoimmune diseases, role of TGF-β 169

Balloon injury, PDGF 182
B cells
  IL-4 45
  IL-5 89
Biological response modifiers 43
Bone morphogenetic proteins, developing heart 5
Brain, HBNF and MK 144, 149, 152
Brain-derived neurotrophic factor, intracerebral delivery 60
Breast cancer, gonadotropin releasing hormone analogs 122

Cancer
  gonadotropin releasing hormone analogs 122
  IL-4 48
  liver, growth factors 228
Cardiac growth factors 1–26
CD40 monoclonal antibodies, IL-4 interaction 46
cdc2 267
  structure and function of cyclin complex 270
Cell cycle regulation, cyclin A 267–277
Cell proliferation, adrenal cortex 105
Cell surface modulator, liver regeneration 80
Cholinergic neurons, NGF 57
Ciliary neurotropic factor, intracerebral delivery 61
c-kit, steel factor 235, 237
Cyclin A 268
  associated kinases 273
  cdc2 complex, structure and function 271
  identification and functional characterization 270
  targets 273
Cyclin B 268
  cdc2 complex 270
Cyclin C 270
Cyclin-dependent kinases 267
Cytokines
  smooth muscle cells 187
  TGF-β interaction 163

Development
  cardiac growth factors 4
  HBNF and MK 151, 152
  liver 221
  steel factor 237
Differentiation
  adrenal cortex 106
  heart 1–26

E1A, cyclin A 272
E2F, cyclin A binding 274
Eicosanoids, smooth muscle cells 189
Embryo, cardiac growth factors 4, 14
Embryogenesis, HBNF and MK 151, 152
Endothelial cells 207
  FGFs 214
  IL-4 47
  PD-ECGF 213
  PDGF 215
Eosinophils, IL-5 and growth and differentiation of 91
Epidermal growth factor
  effect on adrenal cortex 106
  liver development 221
  liver regeneration 222
  smooth muscle cells 182
Epidermal growth factor receptors, liver regeneration 222
Extracellular matrix, smooth muscle cells 189, 192

Fetal cardiac genes 14
Fibroblast growth factors 183
  in adrenal cortex 104
  bibliographic update 279
  endothelial cells 214
  in heart 2
    development 4
    gene responses 14
    organogenesis 13
    subcellular targeting 16
    upregulation 9
  intracerebral delivery 61
  smooth muscle cells 184
    vascular development and injury 185

Fibroblast growth factor receptors
in adrenal cortex 105
in myocardium 9
in smooth muscle cells 186
Fibroblasts, intracerebral grafting 58, 60
Fibrogenesis, TGF-β 226
Fibronectin, smooth muscle cells 189

Gene transfer, intracerebral delivery of growth factors 57–66
Gonadotropin releasing hormone 115
anti-cancer activity 122
release 117
stimulus-effect pathway 119
structure 116
Gonadotropin releasing hormone analogs 121
anti-cancer therapeutic agents 122
Gonadotropin releasing hormone receptor 118
extrapituitary 120
Granulocyte colony-stimulating factor 131–141
Granulocyte colony-stimulating factor receptor 133
Granulocyte-macrophage colony-stimulating factor
mast cell differentiation 32
Granulocyte-macrophage colony-stimulating factor receptor 96, 98
Growth factors, intracerebral delivery 57–66

Haematopoiesis
IL-4 47
steel factor 237
TGF-β 162
Heart, growth factors 1–26
Heparin, smooth muscle cells 190
Heparin-binding growth factor 1, liver regeneration 225
Heparin-binding neurite-promoting factor
biological activity 149
chemistry 144
developmental regulation 152
gene expression 151
molecular biology 147
Heparin-binding proteins 143
Hepatocellular carcinomas, growth factor expression 228
Hepatocyte growth factor
chemical and biological properties 68
encoding gene 74
extrahepatic production 77
liver regeneration 75, 223
molecular cloning and primary structure 70
Hepatocyte growth factor receptor 78
liver regeneration 224
Hypertrophy, myocardial 9
FGF 16

Immunoregulation, TGF-β 160, 162, 168–171
Inflammation
IL-4 48
TGF-β 166

Insulin, adrenal cortex 107
Insulin-like growth factor I
in adrenal cortex 104
hormonal regulation 108
liver development 221
regulation of adrencortical differentiation 107
smooth muscle cells 187
Insulin-like growth factor I receptors 224
in adrenal cortex 105
Insulin-like growth factor II
hepatocellular carcinomas 229
liver development 221
Insulin-like growth factor II receptor 244
Insulin-like growth factor binding protein-1
gene structure and promoter analysis 246
liver regeneration 225
regulation of protein synthesis and gene transcription 248
structure 245
Insulin-like growth factor binding protein-2
gene structure and promoter analysis 250
regulation of protein synthesis and gene transcription 251
structure 249
Insulin-like growth factor binding protein-3
gene structure and promoter analysis 254
regulation of protein synthesis and gene transcription 255
structure 251
Insulin-like growth factor binding protein-4
regulation of protein synthesis and gene transcription 256
structure 255
Insulin-like growth factor binding protein-5, structure 257
Insulin-like growth factor binding protein-6, structure 257
Interleukin-1, smooth muscle cells 187
Interleukin-3, mast cell differentiation 30
Interleukin-4 43
biological effects *in vitro* 45
clinical studies 49
mast cell differentiation 32
potential therapeutic applications 48
receptors 44
Interleukin-5
growth and differentiation of B cells 89
growth and differentiation of eosinophils 91
mast cell differentiation 32
pathophysiology in transgenic mice 91
structures 88
Interleukin-5 receptor, structure 92
Intracerebral grafting, genetically modified fibroblasts 58

Kidney, HGF and regeneration 78

Laminin 190
Leukemic cell growth, TGF-β 171
Lipoproteins, smooth muscle cells 189
Liver development 221

Liver fibrosis, TGF-β 226
Liver regeneration 67, 220
  EGF 222
  HGF 75, 223
  HPGF-I 225
  IGFs 225
  molecular mechanism of initiation of 80
  TGF-α 222, 227
  TGF-β 225
Liver tumors
  IGF-II 229
  TGF-α 228
Luteinizing hormone, GnRH 117
Lymphomas, TGF-β 170
Lymphopoiesis, TGF-β 162

Mast cell growth factor 33
Mast cells
  definition 27
  interleukin dependent differentiation 30
  negative regulators 34
  origin, progenitors 28
  steel factor 237
  stroma cell dependent differentiation 33
Melanocytes, steel factor 237
Microenvironmental cells, mast cell differentiation 33
Midkine 144
  biological activity 149
  chemistry 146
  developmental regulation 152
  gene expression 151
  molecular biology 148
Monocytes, effect of IL-4 46
Morphogenesis, cardiac, FGFs and TGFs 4
Muscle, heart, FGFs and TGFs 4

Nerve growth factor
  cholinergic neurons 57
  intracerebral grafting 58
  mast cell growth and differentiation 33
Neurite outgrowth, HBNF 148, 149
Neurons, nerve growth factor 57
Neurotrophin-3, intracerebral delivery 60

Organogenesis, cardiac 13

Placenta, PD-ECGF 209, 213
Platelet-derived endothelial cell growth factor 207
  biological activity 213
  clinical applications 215
  comparison with other endothelial growth factors 214
  nucleotidylation 213
  organization of human gene 210
  production and localization 212
  purification 208
  structure 210
Platelet-derived growth factors, smooth muscle cells 178
Platelets 207
  PD-ECGF 208, 212
PRAD-1 270
Prostatic cancer, gonadotropin-releasing hormone analogs 122

Retinoic acid, regulation of HBNF and MK expression 152
RF-A, cyclin A 274

Septic shock, TGF-β 167
Signal transduction, cytokine receptor family 135
Smooth muscle cells
  EGF 182
  eicosanoids 189
  extracellular matrix 189
  FFGs 183
  IGF-1 187
  interleukins 187
  lipoproteins 189
  PDGF 178
  TGF-β 191
  thrombin 188
  vasoactive agents 188
Steel factor 235
  in development 237
  mast cells 237
  stem cell effects 239
Stem cell factor, mast cell differentiation 33
Stem cells, steel factor 239
Steroidogenesis
  adrenal 107
  gonadal, GnRH analogs 122
Stroma cells, mast cell differentiation 33
Syndecan 190

T cells, effect of IL-4 46
Thrombin, smooth muscle cells 188
Thrombosis, fibronectin and smooth muscle cells 190
Thrombospondin 190
Transcription, cardiac growth factors 1–26
Transforming growth factor-α
  liver development 221
  liver regeneration 222
  transgenic mice, regulation of liver growth 227
Transforming growth factor-β 159
  in adrenal cortex 104
    hormonal regulation 109
    non proliferative effects 107
  autoimmunity 169
  binding proteins 161
  endothelial cells 215
  endotoxin induced TNF-α production 167
  in heart 3
    development 4
    gene responses 14

in mitochondria 17
organogenesis 13
upregulation 9
immunoregulation 162, 168–171
inflammation 166
liver development 221
liver regeneration 225
lymphomas 170
smooth muscle cells 191
structure and function 160
tumorigenesis 170
Transforming growth factor-β receptors, in adrenal cortex 105
Transgenes, stability and regulation 62
Tryptase, mast cells 28
Tumorigenesis, TGF-β and immunosuppression 171
Tumor necrosis factor-α, TGF-β modulation of 167

Vascular endothelial growth factor 214
Vascular injury, bFGF 185
Vascular smooth muscle cells 177–206
Vasoactive agents, action on smooth muscle cells 188

Wound healing, PD-ECGF 215

Printed and bound in Great Britain by BPC-AUP Aberdeen Ltd. **868**